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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,508	09/16/2003	Toru Takayama	12732-166001	1342
26171 7590 10/24/2007				
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MINNEAPOLIS, MN 55440-1022				
EXAMINER				
LE, THAO X				
ART UNIT		PAPER NUMBER		
2814				
MAIL DATE		DELIVERY MODE		
10/24/2007		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/662,508

Applicant(s)

TAKAYAMA ET AL.

Examiner

Thao X. Le

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6, 13-15, 17, 18, 21-28, 31, 32, 36 and 37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 13-15, 17, 18, 21-28, 31, 32, 36 and 37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
- Paper No(s)/Mail Date 81507, 102705, 91603

- 4) ☐ Interview Summary (PTO-813)
- Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-4, 6, 13-15, 17-18, 21-28, 31-32, and 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2002/0057055 to Yamazaki et al. in view of JP 07292459 to Kitamura et al. and US 6872473 to Song et al.

Regarding claims 1-4, 17-18 Yamazaki discloses a light-emitting apparatus having a light-emitting device in fig. 8-9 comprising: a substrate 401 [0107], a thin film transistor (TFT) 408 [0107], an insulating film 711 [0104] over the TFT, a first electrode 717 [0105] a second electrode 721 [0105] over the first electrode 717 over the insulating film 711 and electrically connected to the TFT, fig. 8; an electroluminescent (EL) film

720 [0105] disposed between the first electrode and the second electrode, fig. 8; a film containing silicon [buffer layer 0107] formed over the second electrode 721, fig. 9, and an inorganic insulating layer 406 [0107] film formed over the film containing silicon; wherein the insulating film 711 comprises a first insulating film 711 and a second insulating film 712 [0104] formed on the first insulating film 711; the first insulating film 711 comprises a material selected from the group consisting of acrylic, polyamide, and polyimide [0091] or [0104], and the second insulating film 712 comprises silicon [0104].

But, Yamazaki does not disclose a light-emitting apparatus wherein a mixed film containing fluoroplastics and metallic oxide form over the second electrode, wherein the second insulating film comprises fluoroplastics.

However, Song discloses an EL device 300 in fig. 1 is being protected by a fluoro layer 400 and an inorganic layer 500. Furthermore, Kitamura discloses a mixed film containing a fluoroplastics and metallic oxide, see constitution. At the time the invention was made; it would have been obvious to one of ordinary skill in the art to use the protective layer teaching of Song and the mixed metal oxide and fluoroplastics teaching of Kitamura to replace the buffer layer and layer 712 of Yamazaki's device, because it would have provided an excellent water repellence, scratch resistance and excellent transparency as taught by Kitamura, see abstract.

Regarding claims 13-14, Yamazaki does not disclose the light emitting apparatus wherein the film containing fluoroplastics is one type of polymer selected from polytetrafluoroethylene.

However, Kitamura discloses the film containing fluoroplastics is one type of polymer selected from polytetrafluoroethylene, [0002] of translation. At the time the invention was made; it would have been obvious to one of ordinary skill in the art to use the fluoroplastics teaching of Kitamura in Yamazaki's device for the same reason as discussed in the above claims 1-2.

Regarding claims 6, 15, 21-22 and 36-37, Yamazaki does not disclose the light emitting apparatus wherein a ratio of the metallic oxides in the mixed film monotonically increases from a portion of the mixed film distant from the first electrode to a portion of the mixed film close to the first electrode.

However, Kitamura discloses an fluoroplastics layer and an metallic layer; it would have been obvious to one of ordinary skill in the art to use the mixed film comprising fluoroplastics and metallic oxides of Kitamura as claim because it has been held that where the general conditions of the claims are discloses in the prior art, it is not inventive to discover the optimum or workable range by routine experimentation. See *In re Aller*, 220 F.2d 454, 105 USPQ 233, 235 (CCPA 1955).

Regarding claims 23-28, Yamazaki does not disclose the light emitting apparatus is selected from the group consisting of digital camera, laptop computer, mobile computer, portable image reproducing device, goggle type display, video camera and cellular phone. However, such recitation of the claimed invention does not result in a structural difference between the claimed invention and the prior art, thus claimed invention is only an art recognized suitability for an intended purpose, MPEP 2144.07.

Regarding claims 31-32, Yamazaki does not disclose the light emitting apparatus wherein the film containing fluoroplastics has irregularities.

However, Kitamura discloses the light emitting apparatus wherein the film containing fluoroplastics that is substantially the material claimed; the structure recited in prior art is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent. Or where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 195 USPQ 430, 433 (CCPA 1977) and MPEP 2112.01.

Response to Arguments

4. Applicant's arguments filed 8/30/07 have been fully considered but they are not persuasive. The Applicant argues that the SiN buffer film of Yamazaki is a internal layer while the fluoroplastics and metal oxides of Kitamura are external protective coating for device such as a lens, a mirror, or an automobile and there is no motivation or suggestion in Kitamura to use the external layer as a internal in Yamazaki's LED device because scratch resistance is of no value in an internal layer. This is not persuasive because a) using the fluoroplastics in lens, mirror, or automobile is just a limited list of intended application for such resin b) as disclosed by Song (US 6871473) fluoroplastics layer 400 can be used as a internal protective layer in LED device c) the benefit of fluoroplastics is not ONLY scratch resistance but it also provides a good moisture

barrier (water repellency) as well. Therefore, the Examiner respectfully submits that using the fluoroplastics layer of Kitamura to replace the SiN buffer layer in Yamazaki's device does not change the principle of operation of the primary reference or render the reference inoperable for its intended purpose, see MPEP § 2143.01, but it rather will provide better moisture resistance and improve the device's performance.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao X. Le whose telephone number is (571) 272-1708. The examiner can normally be reached on M-F from 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael M. Fahmy can be reached on (571) 272 -1705. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

16 Oct. 2007

/Thao X Le/
Primary Examiner, Art Unit 2814